

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for preparation of tips for scanning probe microscopy which comprises:

a) transferring adhesive from carbon tape to a microfabricated Si-tip; and

b) preparing a mat ~~pulling off bundles of a~~ of long transition metal chalcogenide nanotubes with said tip from a mat of long nanotubes prepared on a different area of the tape, by:

i) either heating a transition metal material in the presence of water vapor in a vacuum apparatus or electron beam evaporating a transition metal material in the presence of water vapor, at a preselected pressure, to obtain nanoparticles of the transition metal oxide;

ii) elongating the transition metal oxide nanoparticles of step (i);

iii) annealing the transition metal oxide nanoparticles obtained in step (ii) in a reducing atmosphere with a H₂X gas or H₂ gas and X vapor, wherein X is S, Se or Te, at a suitable temperature, thus obtaining a mat of long nanotubes of the transition metal chalcogenide having

~~wherein said long nanotubes have a size of 0.2-20 μm or greater on said different area of the tape, and are obtained by bulk synthesis of long nanotubes of transition metal chalcogenides from a transition metal material, water vapor and H_2X gas or H_2 gas and X vapor, wherein X is S, Se or Te and synthesis, comprising:~~

~~a) either heating a transition metal material in the presence of water vapor in a vacuum apparatus or electron beam evaporating a transition metal material in the presence of water vapor, at a preselected pressure, to obtain nanoparticles of the transition metal oxide as long as 0.3 microns; and~~

~~[[b)]] c) annealing the transition metal oxide nanoparticles obtained in step (a) in a mild reducing atmosphere with a H_2X gas or H_2 gas and X vapor, wherein X is S, Se or Te, at a suitable temperature, thus obtaining said long nanotubes of the transition metal chalcogenide, said nanotubes pulling off bundles of said mat of long transition metal chalcogenide nanotubes obtained in step b) with said tip.~~

2. (original) A method according to claim 1, wherein said transition metal chalcogenide is WS_2 and/or WSe_2 .

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3. (new) A method according to claim 1, wherein
said microfabricated tip is a microfabricated Si tip.